

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/724,106
Applicant : Robert C. Lovell, Jr., et al.
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TC/A.U. : 2618
Examiner : Chan, Richard
Customer No. : 27896
Docket No. : 2500.0017C (INP0006-US)
Title : System and Method for Virtual Carrier Addressing and
Routing for Global Short Message Service

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
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Sir:

Further to the Notice of Appeal filed herewith, and prior to the filing of an Appeal Brief, Applicant respectfully requests review of the following rejections:

1. Claims 1, 3-5, 7 and 9-12 under 35 U.S.C. §103(a) as being unpatentable over McIntosh (U.S. 2003/0171119) in view of Serbetciouglu et al. (U.S. Patent 5,719,918) and Haumont (U.S. 2005/0108417);
2. Claims 2 and 8 under 35 U.S.C. §103(a) as being unpatentable over McIntosh in view of Serbetciouglu, Haumont, and further in view of Lam et al. (U.S. patent 6,782,276); and
3. Claims 13-15 under 35 U.S.C. §103(a) as being unpatentable over McIntosh in view of Serbetciouglu, Haumont, and further in view of Chambers (U.S. 5,854,982).

In the Advisory Action mailed July 24, 2008, the Examiner maintained that the arguments presented in the Request for Reconsideration filed May 30, 2008 do not place the

present application in condition for allowance. Applicants respectfully disagree with the Examiner on at least two fronts:

(1) There is nothing “artificial” about an IMSI value that would be used if McIntosh and Haumont (and Serbetciouglu et al.) were combined (relevant to each of independent claims 1, 7, 11); and

(2) Chambers fails to disclose or to suggest all of the specific elements that comprise the claimed artificial IMSI value (relevant to claims 13-15).

Regarding point (1), the pending claims are directed to methods and systems for routing messages (e.g., short message service (SMS) messages) using the SS7 protocol. In the claims, an intermediary receives a request to route a message. Conventionally, such routing requests are received by a telecommunication carrier’s infrastructure including a home location register (HLR) and associated mobile switching center (MSC). In the claimed invention, on the other hand, the routing request is received by an intermediary that “appears” like the conventional infrastructure, but where, in fact, no such infrastructure exists. As a subset of the steps that the intermediary must perform to appear as, e.g., an MSC to the third party from which the request was received, the intermediary’s response to the routing request (e.g., an SMR_ROUTING_INFO_RESPONSE message) must include an International Mobile Subscriber Identity (IMSI) value (see, e.g., paragraph [0032] of the present specification).

In accordance with the express limitations of the independent claims, and in connection with providing an IMSI value in the intermediary’s response, an “artificial” IMSI value is dynamically created and is based, at least in part, on the carrier to which the message is to be routed. For example, as explained in paragraphs [0032] and [0037], the dynamically created artificial IMSI value is generated using the mobile country code (MCC) and mobile network code (MNC) of the destination carrier, along with additional data including an internal receiver ID and an internal index, both of which are assigned by the intermediary.

At least one advantage of this scheme is explained in paragraph [0039] of the specification. Specifically, the claimed artificial IMSI creates a virtual subscriber, resulting in the created IMSI value being “allowable” and “routable” in terms of compliance with a

SRIForSM message and a follow-on FSM message (i.e., the relevant messages transmitted over SS7).

Haumont was cited as disclosing the “dynamic selection of an international subscriber identification (IMSI)” as indicated, e.g., on page 4 of the final Office Action mailed April 4, 2008. In the Advisory Action mailed July 24, 2008, the Examiner argues that Haumont teaches that it is well-known to create an IMSI value, and that “the combination of dynamically creating an IMSI value with the teaching [with the teaching] of a virtual network by McIntosh leads to the combination of a virtual network being able to create an IMSI value, which would be ‘virtual’ because the system as disclosed by McIntosh is not physical.” Applicants respectfully disagree that Haumont discloses the claimed “dynamically creating and artificial” IMSI, even in light of McIntosh.

Haumont discloses a method that has the effect of reducing inquiries to network components, such as HLRs. See, e.g., paragraphs [0025] and [0041]. In the disclosed method, as explained in paragraph [0042] and shown in Figure 3, a query 304 is made to the HLR 306 and information 310 that includes the IMSI of mobile subscriber 300 is returned. That information (including the IMSI) is then forwarded to SMSC 314 for further processing. In other words, the SMSC 314 can forward a message 312B to MSC/VLR 316 without also having to query HLR 306.

Notably, the IMSI value that is supplied by the HLR 306 in Haumont is an actual or real IMSI of MS 300, the intended recipient of the SMS message being sent. This IMSI value, however, is neither created dynamically (as it is already in existence) nor is it “artificial” in nature, as is required by the claims. The IMSI value that is supplied in Haumont is a predetermined IMSI value that is, as is well-known in the art, previously assigned to the MS 300. There is simply nothing “artificial” about the IMSI described by Haumont.

Moreover, even if Haumont were combined with McIntosh as argued by the Examiner, the claimed invention would still not result. McIntosh describes a system that aggregates multiple physical HLRs to function as a single virtual HLR. However, an entity making a request of McIntosh’s “virtual HLR” would still want an actual or real IMSI value for the mobile

station that is of interest. McIntosh does not describe why a fake or sham (i.e., artificial) IMSI value would be of any value in his system. If anything, such a fake IMSI value would make McIntosh's "virtual HLR" of no value to requesting entities.

Since Haumont does not disclose or suggest "dynamically creating" an "artificial" IMSI value, any combination of Haumont with the other prior art of record (even with the "virtual HLR" of McIntosh) would still not result in the claimed invention. In light of the foregoing, reconsideration and withdrawal of the §103(a) rejection of claims 1, 3-5, 7 and 9-12 is therefore respectfully urged.

Further, Lam et al. fail to overcome the deficiencies of Haumont described above. Consequently, claims 2 and 8 are likewise believed to be allowable over the prior art of record.

Finally, Chambers was cited against claims 13-15. Those claims recite a specific formula for the claimed dynamically created artificial IMSI value. Specifically, each of claims 13-15 recites that the artificial IMSI value comprises (1) a mobile country code (MCC), (2) a mobile network code (MNC), (3) an internal receiver ID associated with an intermediary component that processed an SRI for SM message, and (4) an index number assigned by the intermediary. Notably, in the Advisory Action, the Examiner advises the Applicant to include the limitations disclosed in paragraphs [0032]-[0077] of the specification. Claims 13-15 expressly recite the features described in paragraph [0032].

In any event, Figure 2 of Chambers shows "an exemplary structure of a prior art memory location for an IMSI." See column 4, lines 60-61 and column 6, lines 61-62 of Chambers. Chambers also discloses that the IMSI contains a "number of information bearing segments" that include an MCC and MNC "and other subscription information." See column 6, line 62 to column 7, line 5 of Chambers. Thus, while Chambers appears to disclose the first of the two recited elements of the dynamically created IMSI value of the present invention, Chambers is completely silent regarding the last two recited elements of the claimed artificial IMSI value. The "other subscription information" mentioned by Chambers has to do with the mobile subscriber or end-user. However elements (3) and (4) of the dynamically created IMSI in accordance with claims 13-15 have to do with information related specifically to the

intermediary. Thus, Applicants respectfully submit that Chambers neither discloses nor suggests all of the elements of claims 13-15. As such, any combination of Chambers with the other prior art of record would not result in the claimed invention as set forth in claims 13-15.

In view of the foregoing, reconsideration and withdrawal of the pending §103(a) rejections of the claims are respectfully requested.

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Respectfully submitted by:

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